

## ABSTRACT

The present invention provides collaborative filtering systems and methods employing statistical smoothing to provide quickly creatable models that can efficiently predict probability that a user likes an item *and/or* similarities between items. Smoothing is accomplished by utilizing statistical methods such as support cutoff, single and multiple prior on counts, and prior on measure of association and the like. By improving model-based collaborative filtering with such techniques, performance is increased with regard to product-to-product recommendations. The present invention also provides improvements over systems based on dependency nets (DN) in both areas of quality of recommendations and speed of model creation. It can also be complementary to DN to improve the value of an existing collaborative filtering system's overall efficiency. It is also employable with low frequency user preference data.